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Collecting Market Hog Inventories: Are weight groups or age groups better?

Kathleen Ott
Dan Lofthus

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EXECUTIVE SUMMARY

In April 2003, the USDA Advisory Committee on Agricultural Statistics requested that NASS research the use of age groups rather than weight groups in collecting data on market hog inventories for the Quarterly Hog Survey. Knowledge of hog producer record keeping systems coupled with this request led the Research and Development Division and the Statistics Division to develop a plan for conducting research on the feasibility of this methodology. The plan was developed by Livestock Branch in Statistics Division and Data Quality Research Section in Research and Development Division and included several phases: cognitive testing, large scale qualitative analysis, field data collection pretesting, and a phase-in of the age group questions.

The first phase of the plan was to conduct focus groups and cognitive interviews in key hog producing states. The focus of the pretests was on the feasibility of using age groups to categorize market hog inventory. If results supported continuing the research, the next phase would be implemented. In February 2004, focus groups were conducted in Iowa and Minnesota. Then, during the 2004 March Hog Survey, the Indiana, Illinois, Iowa, Minnesota, Nebraska and North Carolina State Statistical Offices (SSOs) participated in 60 cognitive interviews with hog producers. Next, based on mixed results from the March interviews, 12 additional interviews were done with large operations in Missouri, Pennsylvania, and Iowa during the June Hog Survey. The results of these focus groups and cognitive interviews are presented in this report.

In general, the focus group and cognitive interview results were mixed. There is no compelling evidence that age or weight is better for collecting market hog data. There are certain respondents who do prefer one method over the other, but there is not a general consensus from respondents about which is more accurate or easier to report. Several factors contributed to operator preferences, including type of operation, record keeping systems used, and market considerations. During the focus groups, weight seemed to be favored, but several producers were apathetic. During initial cognitive interviews, producers with less than 100,000 hogs were fairly evenly split in their preference for weight or age.

However, the information for the largest operations (over 100,000 head) in the initial cognitive interviews warranted further investigation. During the initial interviews, half of the largest operations preferred the age groupings, half had no preference, and none preferred weight. Unfortunately, all but one of these operations were in North Carolina. These mixed results led us to continue with more cognitive pretesting for large operations before making any decisions on the continuation of the age group vs. weight group research. Therefore, during the 2004 June Hog Survey, 12 additional interviews were done, most with very large hog operations. These operations were split in their preference for age and weight.

Based on these results, NASS should continue to collect market hog inventories by weight.

RECOMMENDATIONS

Based on the results of these research, Research and Development Division (RDD) and Statistics Division (SD) recommend the following:

1. Continue to collect market hog inventories by weight groups. However, enumerators should be encouraged to use the weight/age group comparisons that are in the Interviewer's Manual for operations who indicate that age would be a better way for them to report.
2. Continue to collect market hog inventories using the **same** weight groups that are currently on the questionnaire.
3. Cancel all further aspects of the Market Hog Weight Group vs. Age Group research plan. If any other options are considered, testing will be included in a separate research plan.

Collecting Market Hog Inventories: Are weight groups or age groups better?

Kathleen Ott and Dan Lofthus¹

Abstract

Market hog inventories are currently collected by the National Agricultural Statistics Service (NASS) using weight groups. Cognitive work was done to determine if collecting the inventories by age groups would be easier and/or more accurate for producers.

Focus groups and cognitive interviews were done in several hog producing states to get hog producers' feedback on their preference for reporting market hog inventories. Producers were also asked for their opinions on the current weight group categories and proposed age group categories to determine if they are appropriate for the hog industry.

There was an even mix across hog producers in this test who preferred age or weight. Given the lack of a strong preference among producers, it is recommended that inventories continue to be collected by weight groups.

KEY WORDS: Hog Survey, Hog Inventory, Weight Groups, Age Groups

1. BACKGROUND

Market hog inventories are reported on the Quarterly Hog Survey by weight group. This method of collecting market hog data began in 1963 with five weight categories and was modified in 1978 to the current four weight categories. These market hog inventories by weight serve several functions in the data collection, estimation and data user programs.

Separate market hog categories

provide a means to verify quarterly pig crop reported data during the data collection and data verification processes. This is an advantage during within-record consistency editing and verification. In the estimation process, the market weight groups help to provide an indication of how successive quarters' inventories should tie together. Data users utilize these statistics as a means to describe the supply of domestically produced market animals expected at slaughter over the next six months. This has proven to be an

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important analysis option when forecasting future pork supplies.

Although there are advantages to using these categories, there are disadvantages, too. These categories can be burdensome and difficult for respondents to report. Some respondents must convert their record keeping inventory totals to match the category breakouts requested on the Quarterly Hog Report form. These reporting difficulties may add to respondent burden and may contribute to overall non-response. They can also be a source of non-sampling error.

These issues were addressed by the USDA Advisory Committee on Agricultural Statistics in April 2003. The Subcommittee on the Hog and Pig Estimation Program recommended that NASS investigate the feasibility of using age groups instead of weight groups because they believed it would be easier for respondents, more accurate, and result in less respondent burden and better response. This request, along with similar sentiments and support from several SSO statisticians and Statistics Division's Livestock Branch staff, prompted the review of the issues surrounding the weight group categories.

2. RESEARCH PLANNING

The hog inventory questions are part of the Hog and Pig Report questionnaire that is administered quarterly to a sample of hog producers across the country. A copy of the March 2004 Hog and Pig Report is included in Appendix A.

The current market hog inventory question, along with the weight group and age group categories, is as follows:

Weight Group Categories (Current Version)

4. Of the Hogs and Pigs for Market and Home Use owned by this operation on March 1, how many were in each of the following four weight groups?

- a. Under 60 pounds?
- b. 60 - 119 pounds?
- c. 120 - 179 pounds?
- d. 180 pounds and over?

Age Group Categories (Test Version)

4. Of the Hogs and Pigs for Market and Home Use owned by this operation on March 1, how many were in each of the following four age groups?

- a. Under 10 weeks?
- b. At least 10 weeks, but less than 17 weeks?
- c. At least 17 weeks, but less than 22 weeks?
- d. 22 weeks and over?

In order to determine if age groups would be more appropriate for collecting market hog inventories and to test implementation, a multi-phase research plan was designed. The phases included cognitive testing, large scale qualitative analysis, field data collection pretesting, and "phasing-in" of the age group questions. The original research plan is included in Appendix B. After conducting the cognitive testing, our recommendation is to discontinue the other phases of the Research Plan. This report contains information on Phase 1 - cognitive testing.

3. COGNITIVE TESTING METHODOLOGY

Cognitive testing was done in eight hog producing states to determine whether age groups were preferred by hog producers as a better way to report their market hog inventories. In addition, further questions were asked to identify an age category breakdown that would serve most operations.

Two types of cognitive pretests were conducted: focus groups and cognitive interviews. Two focus groups were held in February 2004. The first focus group was a two-hour meeting held in Iowa with approximately ten operators. The second group was a 45-minute meeting held in Minnesota with approximately 25 producers.

A total of 60 cognitive interviews were conducted in March 2004 in six states: Indiana, Nebraska, Minnesota, Iowa, North Carolina, and Illinois. After completing the regular March Hog Survey, approximately 10 operators in each of these states were asked questions regarding how to report their market hog inventory. Finally, 12 additional cognitive interviews were done in conjunction with the June 2004 Hog Survey in Iowa, Missouri, and Pennsylvania. All of the producers in the second wave of interviews were operations expected to have 100,000 or more head of inventory. The cognitive instruments are included in Appendix C.

None of the states or operations were randomly selected for this study. They were selected based on their hog production, willingness to cooperate, and past interest in the hog survey program.

A total of 72 cognitive interviews were conducted in addition to the two focus groups. These 72 operations accounted for approximately 25 percent of the total U.S. hog inventory.

4. RESULTS

4.1. Preference for Weight or Age

The tables and information presented below give details on the focus groups and cognitive interviews. There are several different breakdowns and operation-specific comments and clarifications.

At some point during each focus group and cognitive interview, operators were asked their preference for weight or age groups. The answers given are broken down in several ways. The number of operators who preferred weight or age groups by state is shown in Table 1.

As shown in Table 1, a large majority of operators in the two focus groups preferred weight groups to age groups as a means to report their market hog inventory. However, in both phases of the cognitive interviews, producers are almost evenly split in their preference. Of particular interest may be the overwhelming preference for weight by producers in Iowa and the preference of producers in North Carolina for age. This will be discussed later in more detail.

Hog operations are divided into strata by size of the operation for sampling and analysis purposes. These strata are different by state based on each state's hog production.

Table 2 shows the preference for weight or age groups by strata for the operations that participated in the cognitive interviews. The strata are represented by letters, with A being the smallest operations, and F being the largest.

Table 1: Number of operators who prefer weight or age groups for reporting market hog inventory by state.

State	Prefer Weight	Prefer Age	No Preference or didn't answer
Focus Groups:			
Iowa	7	1	1
Minnesota	15	4	0*
Total from focus groups	22	5	1
Initial Cognitive Interviews			
Indiana	5	3	2
Illinois	2	5	3
Iowa	9	1	1
Minnesota	3	3	3
Nebraska	4	6	1
North Carolina	1	5	3
Total from initial cognitive interviews	24	23	13
Second Group of Cognitive Interviews			
Iowa	5	1	0
Missouri	0	2	0
Pennsylvania	1	3	0
Total from second group of cognitive interviews	6	6	0

* Producers in the Minnesota focus group were asked to pick either weight or age, without the choice of “no preference”.

**Table 2: Preference for reporting market hog inventory by Strata
(both rounds of cognitive interviews)**

Strata*	Preference for reporting market hog inventory				Total
	Weight	Age	No Preference	Didn't Answer	
A	1	0	0	0	1
B	1	0	0	0	1
C	7	5	1	0	13
D	2	1	0	0	3
E	8	6	4	0	18
F	11	17	7	1	36
Total	30	29	12	1	72

*The strata are identified by letters, with the smallest operations labeled "A" and the largest operations labeled "F".

As shown in Table 2, respondent opinions were mixed across strata. About half of the operations in each strata preferred weight or had no preference and half preferred age. Because the operations in the strata labeled "F" (the largest hog operations in each state) has a wide size range, operations were further broken down by the number of hogs they reported on the 2004 March Survey in Table 3. This number was not necessarily the number of hogs used to stratify and sample the operation depicted in Table 2.

In the initial wave of cognitive interviews, none of the respondents with at least 100,000 head preferred weight; four preferred age and three did not have a preference (not broken out separately in Table 3). Unfortunately, all but one of these operations were located in North Carolina, so it was unclear if there was a consistent preference by size of operation or if there was a state or regional difference. This was the reason why further cognitive interviews with the largest hog producers in other states were

conducted in June 2004.

As shown in Table 3, once large operations from other states were included, the preference looks more evenly split, with eight producers preferring age and eight preferring weight or having no preference.

Table 3 clearly shows that there is no strong preference for weight or age group categories for reporting market hog inventory. Therefore, there is no compelling evidence that the weight groups should be changed to age groups.

Using previously reported survey data, the general type of operation for each cognitive interview respondent was determined. Operators were mixed between age and weight across the operation types. Table 4 shows this information by type of operation for all cognitive interviews.

Table 4 shows that there is not a strong preference for age or weight by the type of operation. Operators are mixed in their preference, with no clear evidence that one method is better for most respondents.

Table 3: Preference for reporting market hog inventory by Size of Operation
(both rounds of cognitive interviews)

Size of Operation (Head)*	Preference for reporting market hog inventory				Total
	Weight	Age	No preference	Didn't Answer	
0-999	1	0	1	0	2
1,000-4,999	11	4	1	0	16
5,000-9,999	8	9	2	0	19
10,000-19,999	2	3	1	0	6
20,000-39,999	1	3	1	1	6
40,000-99,999	2	2	3	0	7
100,000 and over	5	8	3	0	16
Total	30	29	12	1	72

* Size of operation was determined from March 2004 hog inventory data.

Table 4: Preference for reporting market hog inventory by Type of Operation
(both rounds of cognitive interviews)

Type of Operation*	Preference for reporting market hog inventory				Total
	Weight	Age	No preference	Didn't Answer	
Farrow to finish	20	24	7	0	51
Finish only	10	5	4	0	19
Farrow to wean	0	0	1	1	2
Total	30	29	12	1	72

* type of operation was determined using previously reported data

4.2 Respondent Comments

4.2.1 Comments on Age vs. Weight

Comments from hog producers were interesting and often contradictory. Several of the same reasons were given for preferring age and weight. For example, some producers who preferred weight said that feed is based on weight, while others who preferred age said that rations are changed based on age. These kinds of differences seem to be common, indicating that there will not be a standard way of collecting market hog inventory data preferred by all or even most hog producers. Comments given by hog producers in the focus groups and cognitive interviews who preferred weight and/or age are given in Appendix D.

The variety of comments shows the wide range in record keeping and reporting preferences among hog producers in the U.S. Iowa was the only state where producers, regardless of size, were somewhat consistent in their preference for one data collection method or the other (they preferred weight in general). North Carolina producers preferred age, but they were all very large operations.

Based on these comments, operations that deal predominantly with small pigs may prefer age classifications to weight classifications. Some producers who had inventory at several stages of development thought that the younger pigs are easier to inventory by age but as the inventory reaches the finishing stages, weight may be a common denominator. It may be worth exploring an alternative way to report the smallest pigs on the Hog Survey. It was suggested that if the weight groups are kept, the smallest pigs should be separated into two categories, unweaned pigs and pigs in the nursery. This suggestion is discussed more in Section 5.

4.2.2 Comments on Category Breakouts

Producers gave several ideas on their ideal way to report market hog inventory. Operators in both focus groups, and at least 13 producers in the cognitive interviews, suggested using categories related to the stage of development. These stages were labeled differently by producers, but generally describe unweaned, nursery, grower and finisher stages. The specific categories given by producers are included in Appendix E.

In addition to using stage of development, operators gave several recommendations on specific age and weight group categories. Suggestions for these groupings are shown in Appendix F. Again, the recommendations were so varied across type and size of operation that there may not be a change to the weight group categories that would satisfy most producers. They each have an individually preferred way of reporting.

Since the initial assumption was that age groups would likely be implemented, determining age group categories that could closely match the weight group category data series was of interest. As several producers predicted during the focus groups, there was significant variability among responses when respondents were asked to provide the number of weeks required to reach certain animal weights. The age ranges that producers associated with each weight group are shown in Figure 1.

There is tremendous variability among producers in the number of weeks that they claim it takes for a market hog to reach the assigned weights. There are many possible reasons why this variability is so large. First, there is real variability among producers based on the size of the operation, feed rations, and other factors. Second, some interview contacts are account managers or

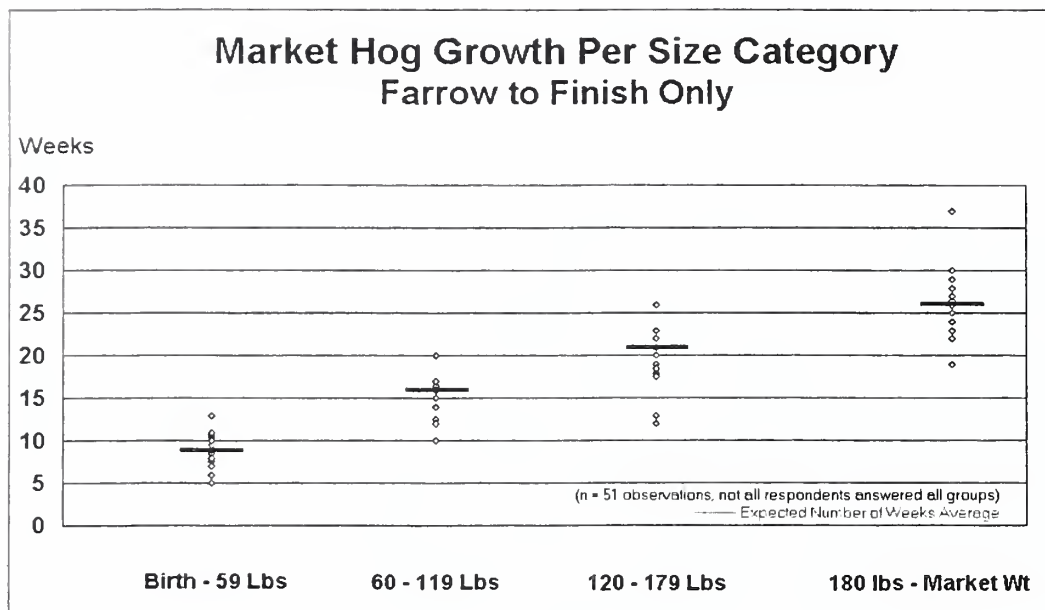


Figure 1

part of the book-keeping staff and may not have hands-on experience with hog production. In the Minnesota focus group, producers agreed that the operators that are “on the floor” have a better idea of the weights “off the top of their head”, while those who were more removed from the day-to-day operations had to refer to records. Last, producers who know the weight of their hogs may not know the age and vice versa. This large variability is discussed further in the next section as it relates to combining the age and weight group categories.

4.3 Weight and Age Combination

The variability in responses to the number of weeks required to reach each weight measure suggested that a defined combination of the two ideas may provide a method to assist respondents, regardless of their preference for weight or age groups. During the second round of cognitive interviews in June 2004, an additional

question was added to get a reaction from those respondents. The test question was worded as follows:

Of the Hogs and Pigs for Market and Home Use owned by this Operation on June 1, how many were in each of the following four weight groups?

- Less than 60 pounds (approximately 0-9 weeks)
- 60 to 119 pounds (approximately 10-16 weeks)
- 120 to 180 pounds (approximately 17-21 weeks)
- 180 pounds and over (approximately 22 + weeks)

The reaction from the 12 respondents was again mixed. Although the number of respondents in this group was small and should not necessarily be considered definitive, it is likely that the variability in the number of weeks to reach each defined weight from operation to operation would create additional confusion. Also, it may take the focus off the hog inventory needed in that category and put the focus on whether the age and weight definitions match the respondent’s experience. For these reasons, this option is

not encouraged as a questionnaire design option.

However, the defined age categories in the Interviewer's Manual can be referenced by enumerators and office staff when needed during the interview process. The age groups should not be adjusted to match the respondent's preference. Rather, the interviewer would use the age category descriptions to assist the respondent when converting record keeping data to match the breakouts from the questionnaire. This will ensure that the data collection design remains consistent across reports and across States.

5. ALTERNATIVES FOR REVIEW

Two reporting alternatives were suggested by respondents in the focus groups and cognitive interviews. One option for collecting market hog inventory data by weight group is to divide the smallest weight group (under 60 pounds) into two or more categories. These categories may be based on age, weight, stage of development, or something else. Several operators indicated that this category was too broad for them to answer accurately. At the same time, they know their inventory for the smallest pigs fairly accurately.

A second option is to collect at least some of the market hog inventory data by stage of development. In general, producers find it difficult to provide inventory breakdowns for pigs weighing more than 60 pounds (at least 10 producers said this during the cognitive interviews). Producers often just divide their total hogs by three to fill the top three categories. Collecting data by stage of development may help producers with this problem. The stages may include unweaned pigs, pigs in the nursery, hogs in the finishing phase, etc. The actual names of these categories would have to be explored in much

more detail. Surveys such as the National Animal Health Monitoring System (NAHMS) may be helpful in determining the language to use.

5.1 Other Data Collection Issues

Several ideas concerning data collection issues not directly related to the use of age or weight groups came up as a result of the focus groups and cognitive interviews. These ideas are listed in Appendix G and will be forwarded to the Hog Survey Specifications Team for review.

6. CONCLUSION

In conclusion, there is no clear preference for using weight groups or age groups across states, size of operation, or type of operation. In fact, an equal number of producers preferred each method. However, hog producers in specific states do seem to have a preference. For example, large producers in North Carolina tend to prefer using age, while producers in Iowa tend to prefer weight.

When producers were asked to create their optimum age reporting categories, there is large variation in the number of weeks required to reach a weight benchmark. There are also widely varying opinions on the category definitions. Some producers want fewer categories, some want more, some want to use age, some weight, and some stage of development.

In the absence of a clear respondent preference, NASS should maintain a consistent definition of market hog categories and data collection requirements by continuing to collect market hog inventory using the current weight group questions and answer categories.

7. ACKNOWLEDGMENTS

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HOG REPORT

March 1, 2004

Form Approved
O.M.B. Number 0535-0213
Approval Expires 1/31/07
Project Code 161
QID 30203199

Version 99

Dear Producer:

Information requested in this survey is used to prepare estimates of current and future supplies of pork. Facts about your operation are **confidential** and used only in combination with similar reports from other producers. Response is **voluntary**.

Sincerely,

Rich Allen, Chairperson
Agricultural Statistics Board

Stratum	POID	Tract	Subtr.
_____	_____	_____	_____

Attempted Contacts		
Date	Time	Notes

1. Please verify name and mailing address of this operation. Make corrections (including the correct operation name) on the label and continue. ☐ [Check if name and address are verified.]
2. Has this operation **owned or raised hogs or pigs** at any time since **December 1, 2003**? (Including hogs and pigs raised under contract.)
- ☐ Yes - [Continue with **Item 3**.]
- ☐ No - 2a. Were any hogs or pigs owned by someone else on this operation on **March 1**?
- ☐ Yes - [Go to **Item 10a** on **Page 3**.]
- ☐ No - [Go to **Section 2** on **back**.]

3. Are the day-to-day decisions for this **hog operation** made by one individual, a hired manager, or partners? [Check one]
- ☐ One individual [Go to **Section 1**.]
- ☐ A hired manager [Go to **Section 1**.]
- ☐ Partners - How many individuals are involved in the day-to-day decisions for this hog operation? ☐
- [Enter the number of partners, including the partner named on the label. Identify the other persons in this partnership in the boxes below, then continue with **Section 1**.]

A Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: (____) _____ Did this partner own hogs individually on December 1, 2003 ? <input type="checkbox"/> Yes <input type="checkbox"/> No	B Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: (____) _____ Did this partner own hogs individually on December 1, 2003 ? <input type="checkbox"/> Yes <input type="checkbox"/> No
C Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: (____) _____ Did this partner own hogs individually on December 1, 2003 ? <input type="checkbox"/> Yes <input type="checkbox"/> No	D Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: (____) _____ Did this partner own hogs individually on December 1, 2003 ? <input type="checkbox"/> Yes <input type="checkbox"/> No

Continue on Next Page.

Office Use						
Ptr A Str	Ptr B Str	Ptr C Str	Ptr D Str	R. Unit	Dec 1	Subst.
925	926	927	928	921	931	941

SECTION 1 - HOGS AND PIGS OWNED

1. On **March 1**, did this operation (named on label) **Own any Hogs or Pigs**, regardless of location?
(Including hogs or pigs being raised under contract for you by someone else.)

☐ Yes - [Continue]

☐ No -

- 1a. Did this operation **Own Hogs or Pigs at any time** from
December 1, 2003 through February 29, 2004?

☐ Yes - [Go to Item 7.]

☐ No - (1) Were any **Hogs or Pigs Owned by Someone Else**
on this operation on **March 1?**

☐ Yes - [Go to Item 10a.]

☐ No - [Go to Section 2 on back.]

Number
Owned March 1

301

2. How many **Sows and Gilts for Breeding** were owned by this operation on **March 1?**
(Including unweaned gilts intended for breeding.)

+

- 2a. How many of the (Item 2) **Sows and Gilts are Expected to Farrow**
during **March, April, or May (2004)?**

331

- 2b. How many of the (Item 2) **Sows and Gilts are Expected to Farrow**
during **June, July, or August (2004)?**

332

3. How many **Boars and Young Males for Breeding** were owned by this operation on **March 1?**
(Including unweaned boar pigs intended for breeding.)

302

+

4. Of the **Hogs and Pigs for Market and Home Use** owned by this operation on **March 1**,
how many were in each of the following four weight groups?
(Excluding breeding hogs and pigs reported in Items 2 or 3.)

- 4a. Under 60 pounds? (Including unweaned pigs intended for market or home use.)

311

+

- 4b. 60 - 119 pounds?

312

+

- 4c. 120 - 179 pounds?

313

+

- 4d. 180 pounds and over? (Including sows and boars no longer used for breeding.)

314

+

5. [Add Items 2 + 3 + 4a + 4b + 4c + 4d and verify the total.
If necessary, make corrections before continuing.]

300

=

Then the **Total Hogs and Pigs** owned by this operation on **March 1** was:

Out-Of-State Hogs and Pigs

6. Did this operation own any hogs or pigs in another State on **March 1?**

☐ Yes = 1 [Enter code 1.]

☐ No = 3 [Enter code 3.]

Code

321

[If Yes, verify this report includes **ONLY** hogs owned in this State.
Complete a separate report for hogs owned in each of the other States.]

1- Incomplete, Owns Hogs

2- Incomplete, Unknown

3- No Hogs Owned

598

Continue on Next Page.

SECTION 1 - HOGS AND PIGS OWNED (CONTINUED)

Farrowings and Pig Crop from December 2003 through February 2004

7. Did any Sows or Gilts owned by this operation Farrow during the Last Three Months? (December - February)

☐ Yes - [Complete the following for each month, starting with the most recent month.]

7a. How many Sows and Gilts Owned by this Operation Farrowed during (month)?

Farrowings		
February Sows	January Sows	December Sows
888	891	894

7b. How many of the Pigs from these (Item 7a) litters were:

(1) Owned by this operation on March 1? ..

(2) Sold or Slaughtered before March 1? ..

Pig Crop		
February Pig Crop	January Pig Crop	December Pig Crop
889	892	895
890	893	896

☐ No - [Continue]

1- Incomplete, Has Farrowings	599
2- Incomplete, Farrowings Unknown	
3- No Farrowings	

Death Loss from December 2003 through February 2004

8. How many Weaned Pigs and Older Hogs Owned by this Operation Died during December (2003), January, and February (2004)?

335

Contract Hog and Pig Production

9. Were any Hogs or Pigs owned by this operation being raised Under Contract by another person or firm on March 1?

☐ Yes - 9a. How many Producers were raising hogs or pigs for you under contract on March 1?

317

9b. How many Hogs and Pigs (owned by this operation) were these (Item 9a) Producers raising for you under contract on March 1?

333

[Verify that these hogs and pigs ARE included in the (Item 5) total, then continue.]

☐ No- [Continue]

10. Were any Hogs or Pigs Owned by Someone Else on this operation on March 1?

☐ Yes - 10a. How many Hogs and Pigs Owned by someone else were on this operation on March 1?

322

10b. Who owns the hogs and pigs?

10c. Is this hog owner a Contractor?

☐ -Yes ☐ - No

[Verify that these hogs and pigs ARE NOT included in Item 5 on the previous page.]

-- AND --

[Complete a separate questionnaire for these Item 10a hogs.]

☐ No- [Continue]

(Owner's Name, Address, & Phone Number)	
Name	_____
Address	_____
City, St., Zip	_____
Phone	_____

[Complete Section 2 only if the operation shown on the label DOES NOT own hogs or raise hogs under contract, otherwise go to Section 3.]

1- Incomplete, Hogs Present	499
2- Incomplete, Unknown Presence	
3- Valid Zero	

SECTION 2 - INTENTIONS TO OWN OR RAISE HOGS

[Complete Section 2 only if the operation shown on the label DOES NOT own hogs or raise hogs under contract, otherwise go to Section 3.]

11. Will the operator on the label raise hogs or pigs on this operation at any time between now and June 1, 2004?

- ☐ Yes - [Enter code 1, then go to Section 3.]
☐ Don't Know - [Enter code 2, then continue with Item 12.]
☐ No - [Enter code 3, then continue with Item 12.]

Code
492

12. Does this operation (named on the label) have any buildings, structures, or facilities for raising hogs or pigs? (such as buildings used for breeding, farrowing, finishing, etc.)

- ☐ Yes - [Enter code 1.]
☐ No - [Enter code 3.]

Code
488

13. Has this operation sold, rented, or turned over any hog facilities to someone else?

- ☐ Yes - [Continue] ☐ No - [Go to Item 15.]

14. Who is using the hog facilities now?

[Obtain the name and address of the person or firm now using the facilities. Complete a separate questionnaire for this operation.]

Operation Name: _____
Operator Name: _____
Address: _____
Phone: _____
City: _____ State: _____ ZIP: _____

15. Was the operator (name on label) operating a farm or ranch on December 1, 2003?
 (Including growing crops or raising livestock.)

- ☐ Yes ☐ Don't Know ☐ No

[Write a note to describe the current status of this operation, then continue with Section 3.]

SECTION 3 - CONCLUSION

[If the opDomStatusId on the label is 99, go to Item 2.]

1. Do you (the operator named on the label) make any day-to-day decisions for another hog operation?

- ☐ Yes - 1a. What is the name of the other hog operation(s): _____

[Complete a separate questionnaire for this operation.]

- ☐ No - [Continue]

2. Would you like to receive a copy of the results of this survey in the mail?

(The survey results will also be available on the Internet at <http://www.usda.gov/nass/> after 3:00 pm on March 26, 2004)

- ☐ Yes = 1 [Enter code 1.]
☐ No = 3 [Enter code 3.]

Code
099

This completes the survey. Thank you for your help.

Respondent's Name: _____ Phone: (____) ____ - _____ Date: _____

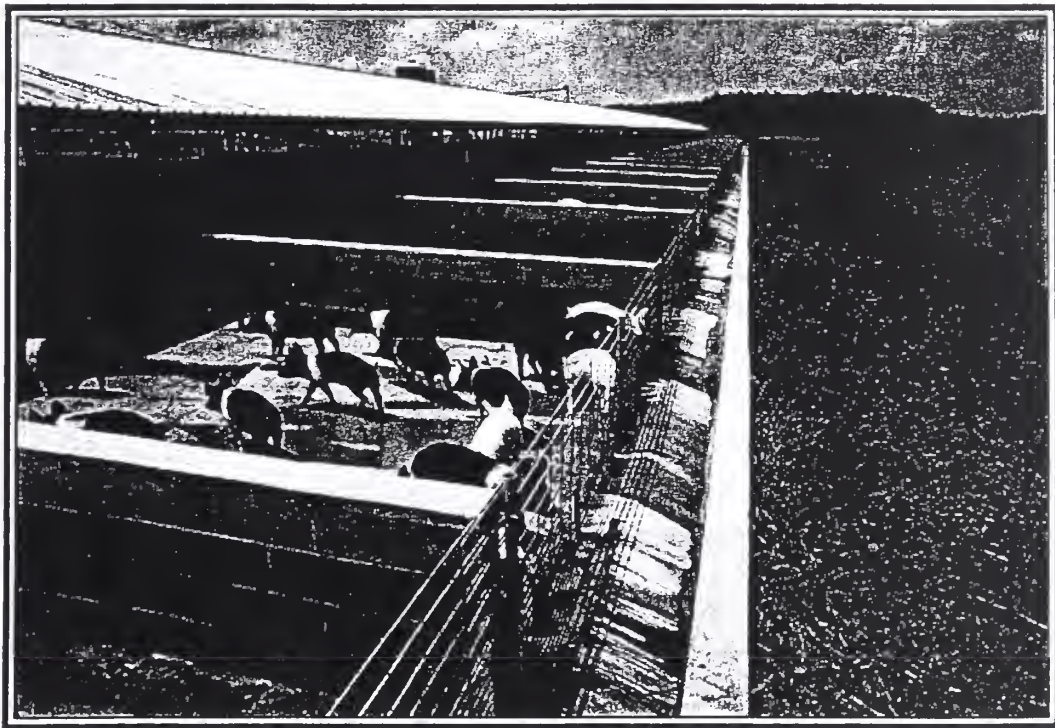
Optional Use	
407	408

Respondent	Response Code	Enum.	Eval.	Julian Date	Feb.	Mar.	Mar.	Office Use For POID
1-Op/Mgr	101	2-Tel	910	098	100	987		789
2-Sp		3-Int						
3-Acct/Bkpr		7-TR						
4-Oth		8-IR						
5-Est R		9-Inac						
6-Est NR								
8-Office Hold								
9-Partner								
S/E Name					28 - 059	05 - 065	12 - 072	
					29 - 060	06 - 066	13 - 073	
					Mar.	07 - 067	14 - 074	
					01 - 061	08 - 068	15 - 075	
					02 - 062	09 - 069	16 - 076	
					03 - 063	10 - 070	17 - 077	
					04 - 064	11 - 071	18 - 078	

Market Hog Inventory by Age Research Plan

December 3, 2003

Updated January, 2004



Contact Info:

Data Quality Research Section - Kathy Ott (703) 235-5213 Ext 117

Livestock Section - Dan Lofthus (202) 720-3106

Hog Survey Team - Mike Easdale (202) 720-4332

Hog Age Group Research

January, 2004

General

The Quarterly Hog Report currently asks respondents to provide the number of hogs and pigs for market or home use in four separate weight groups as well as to verify the total. Figure 1 contains the specific questions for the September quarter.

4.	Of the Hogs and Pigs for Market and Home Use owned by this operation on September 1 , how many were in each of the following four weight groups? (Excluding breeding hogs and pigs reported in Items 2 or 3.)	
4a.	Under 60 pounds? (Including unweaned pigs intended for market or home use.)	311
4b.	60 - 119 pounds?	312
4c.	120 - 179 pounds?	313
4d.	180 pounds and over? (Including sows and boars no longer used for breeding).	314
5.	[Add Items 2 + 3 + 4a + 4b + 4c + 4d and verify the total. If necessary, make corrections before continuing.] Then the Total Hogs and Pigs owned by this operation on September 1 was:	300

Figure 1

The Livestock Section in Statistics Division (SD) requested that the Research and Development Division (RDD) investigate the possibility of using age groups in lieu of the weight groups given above. It is believed that it may be easier for respondents to provide inventory by age groups; data provided by these breaks may also be more accurate than those provided by weight groups. Since NASS has no documented experience with asking for hogs and pigs by age groups, research is needed for this approach. A preliminary list of issues to investigate are:

- Can respondents provide their hog and pig inventories by age groups? Does this depend on the size of the operation?
- Is it easier for respondents to provide their hog and pig inventories by age groups than by weight groups? Does this depend on the size of the operation?
- What should the age groups be?
- Do respondents feel more confident with their answers to inventory questions based on age groups than on weight groups? Does this depend on the size of the operation?
- How do age groups relate to the current weight groups?
- How should the survey questions be worded?

This document describes the research plan to investigate the use of age groups on the Quarterly Hog

Report.

Phase I: Background Investigation and Question Development

Phase I will consist of all background work to determine the most appropriate way to ask hog and pig inventory by age groups. The goal of this phase will be the creation of at least one “final” questionnaire that contains age groups to be field tested in Phases II and III. Phase I will take place between October 2003 and April 2004.

1. Research whether there are any existing data sets that relate hog/pig ages with weights. Possible sources of such data sets include universities and producers. It is possible that a hog producer on the NASS Agricultural Advisory Council may be able to provide such data. The purpose of this step is to determine what age categories to use. Data Quality Research Section (DQRS) in the Research and Development Division will take the lead on this activity.
2. Inform the Office of Management and Budget (OMB) of our focus group and cognitive interviewing pretesting plans and obtain necessary clearance.
3. Conduct at least two focus groups in key hog states with hog producers to obtain their reaction to asking inventory by age groups. The focus groups may also uncover potential problems with the age group approach. DQRS will work with the Livestock Section to prepare the protocol and will then conduct the focus groups. Focus groups will be conducted in Iowa and Minnesota.
4. Based on information gained from (1) and (3), DQRS will draft age group survey questions (incorporated into a questionnaire) and provide them to the Livestock Section for feedback. The draft could also be provided to SSOs in key hog producing states for comment. The draft questionnaire will be modified as necessary based on feedback.
5. Perform up to 60 cognitive interviews in 6 states on the final draft of the questionnaire containing the age group questions (created in step 4 above). In addition to the questionnaire containing age groups, respondents will also be asked to complete the current questionnaire based on weight groups and discuss similarities and differences between data reported on the forms. The pretests will be performed by DQRS staff and SSO staff who have received pretesting training. We will plan for one DQRS staff member to conduct ten interviews in one state and five SSO staff members (in five states) to each conduct ten interviews each for a total of 60 interviews. Cognitive interview states will include Illinois, Iowa, Indiana, Minnesota, Nebraska, and North Carolina.
6. Prepare a final draft of the age group questions based on feedback from the cognitive interviews. This questionnaire will be used in the non-probability analysis described in Phase II. The states involved in the non-probability analysis will be Iowa, Indiana and Minnesota.

Phase II: Non-probability Analysis

The second phase will consist of a non-probability sample with several interviews done using both sets of questions. For half the cases, the weight groups will be asked during the regular interview. At the end of the interview, the respondent would be asked to record their hogs by age groups as well. The other half of the cases will be asked the age groups during the regular interview, followed with the weight groups at the end.

The non-probability sample for this phase will be selected from three states and will include about 200 cases per state for a total of 600 samples. Based on several factors including availability of sample, Iowa, Indiana, and Minnesota will participate. This phase will be conducted in June and September 2004 with 600 samples in each quarter. Livestock Section and the SSOs in the test states will handpick approximately 50 operations from the Prob-1 strata to be included in this test. Unless a previous arrangement has been worked out, interviews with Prob-1 operations will be conducted in person.

The analysis done on this phase will be unweighted ratio analysis comparing proportions across different parts of the questionnaire. For analysis purposes, we will need to capture and retain both reported data and edited data.

Table 1 shows the sample groups needed for Phase II in Iowa, Indiana, and Minnesota. Sampling will be done during the Spring 2003 classify.

Table 1: Sample descriptions for Phase II to be conducted in June 2004 and September 2004 in Iowa, Indiana, and Minnesota

Strata Class	Prob-1		Non-Prob-1		
Test Group	Group 1	Group 2	Group 1	Group 2	Group 3
Order of Questions	Weight/Age	Weight only (regular sample)	Age/Weight	Weight/Age	Weight only (regular sample)
Sample Selection method	Handpicked for Research	Non-research sample	Non-probability based, selected for research	Non-probability based, selected for research	Non-research sample
Type of sample	Operational	Operational	Supplemental	Supplemental	Operational
Sample Flag on Sample Master*	1	1	0	0	1
Version Number **	2	1	3	2	1

* Sample Flag will be a new variable indicating whether a case should be included in the summary or not

** Version Number will identify the question order used in the instrument

Phase III: Field Data Collection Pretest

Phase III, called the Field Data Collection Pretest, will consist of using the questionnaire containing age group questions to collect data; the data will then be summarized and compared with summary data from the existing weight group questions. Initially, a completely supplemental sample was considered. However, there is little or no sample for the larger hog strata to make this approach feasible. Therefore, we will use operational sample for records in the Prob-1 strata and supplemental sample in the Non-Prob-1 strata for the field data collection pretest.

The Field Data Collection Pretest will be implemented in December 2004 and continue for four quarters. If the age group classifications are approved, they will be used for all operational sample in December 2005.

1. Select a supplemental sample of hog operations from the Non-Prob-1 strata during the Spring 2004 Sample Select process. Also, select some operations from the Prob-1 strata to participate in the test. The exact size of each sample, the states and strata from which it will be drawn, will be determined with input from the Livestock Section, Commodity Section, and Sample Design Sections.
2. Use the new questionnaire containing age groups in December 2004, March 2005, June 2005, and September 2005 in conjunction with the operational Hog Quarterly Report sample.
3. The CASIC and Editing Section would prepare new or modify existing SPS and Blaise programs for data collection and editing using the new questionnaire.
4. Compare summarized survey data for the US and key hog producing states from the operational and supplemental samples. The Commodity Section (Methods) will prepare new or modify existing SPS summary programs to summarize the data from the new questionnaire. Livestock Section commodity experts will interpret the results and provide recommendations.
5. Prepare research report documenting the project, the results and recommendations. Note: this plan allows for adequate time to perform further investigations, if necessary, prior to the target date of December 2005 for implementing age categories operationally.

As in Phase II, for analysis purposes, we will need to capture and retain both reported data and edited data.

Table 2 shows the types of test groups needed for Phase III. Sampling will be done during the Spring 2004 classify.

Table 2: Sample descriptions for Phase III to be conducted in December 2004 and March, June, September 2005 in Illinois, Iowa, Indiana, Minnesota, Nebraska, and North Carolina

Strata Class	Prob 1				Non-Prob-1	
Group	Group 1		Group 2		Group 1	Group 2
Quarter	Dec 04 & Mar 05	Jun 05 & Sept 05	Dec 04 & Mar 05	Jun 05 & Sept 05	Dec 04 - Sept 05	Dec 04 - Sept 05
Order of Questions	Weight/Age	Age/Weight	Weight only	Weight/Age	Age/Weight	Weight/Age
Sample Selection method	Rep based	Rep based	Non-test sample	Rep based	Probability based	Probability based
Type of sample	Operational	Operational	Operational	Operational	Supplemental	Supplemental

Phase IV: Phase In New Questionnaire

If the age group categories are approved, they will slowly be phased in starting in December 2005. At this point, one rep will use only the age group categories and four reps will use only the weight group categories. Data from the age group and weight group data collections will be summarized together using weight group categories for final publication. All sample from this point forward will be operational.

All reps are expected to use age group categories by December 2006 when hog data will be published by age groups instead of weight groups.

Resources and Time Line

This project will require the assistance of several NASS organizational units. Table 3 lists these organizational units, their roles and associated out-of-pocket expenses. This includes conducting 2 focus groups and approximately 60 cognitive interviews, interviewing an estimated 600 samples each in June and September 2004, and an estimated 1500 samples each in December 2004, March, June, and September 2005. Table 4 shows estimated NASDA costs.

Table 1: NASS Organizational Units, Roles and Costs

Organizational Unit	Roles	Out-of-Pocket Expenses ^{1/}
Data Quality Research Section	<ul style="list-style-type: none"> • Primary investigators • Project coordination • Question Development & pretesting • Analysis of pretest and field test data • Preparation of final report 	<ul style="list-style-type: none"> • Travel for focus groups: \$1,500 • Travel for pretesting: \$1,500
Livestock Section	<ul style="list-style-type: none"> • Subject matter expertise – provide advise, help interpret data, analysis of field test data • Assist in preliminary work and pretesting. 	<ul style="list-style-type: none"> • Travel for pretesting: \$1,500
State Statistical Offices	<ul style="list-style-type: none"> • Cognitive pretest interviews • Arrange for HQ pretest interviews • Data collection for phase III and Phase III field test 	<ul style="list-style-type: none"> • Travel for pretesting: \$1,000 ^{2/} • Phase II supplemental sample data collection (NASDA) • Phase III supplemental sample data collection (NASDA)
Questionnaire Design Section	<ul style="list-style-type: none"> • Prepare questionnaire drafts for pretesting and final version to be used in field test 	<ul style="list-style-type: none"> • Zero
Sample Design Section	<ul style="list-style-type: none"> • Determine supplemental sample size • Prepare sample for field data collection (2004 Sample Select) 	<ul style="list-style-type: none"> • Zero
Commodity Survey Section	<ul style="list-style-type: none"> • Survey administration for the field test 	<ul style="list-style-type: none"> • Zero
CASIC & Editing Section	<ul style="list-style-type: none"> • Create or modify SPS edit and Blaise instrument for field test 	<ul style="list-style-type: none"> • Zero
Commodity Section (Methods)	<ul style="list-style-type: none"> • Create or modify SPS summary for field test 	<ul style="list-style-type: none"> • Zero

1/ Includes only travel and other out-of-pocket expenses.

2/ This is the total for all SSO pretesting travel expenses. This expense is anticipated to be quite low because staff will often drive the office vehicle and not require per diem.

Table 4: NASDA Costs

Fiscal Year	Survey Period	Test Phase	Estimated NASDA Cost
2004	June, September 2004	Phase II	
	December, 2004	Phase III	
2005	March, June, September, 2005	Phase III	
2006	December 2005 and after.	Phase IV	

Table 5 contains the time line for this project. The Livestock Section asked that, assuming the project is a success, a final version of the Quarterly Hog Report questionnaire containing age group questions would be ready for implementation in December 2005. The time line given here should easily meet that deadline while allowing for plenty of time throughout the project for review.

Table 5: Project Time Line

Phase	Task	Assigned To	Dates
I	Information gathering on the relationship between hog/pig ages and weights.	Data Quality Research Section	September - December 2003
I	Inform OMB of our pretesting plans	Data Quality Research Section, Commodity Survey Section	October 2003
I	Conduct focus groups with hog producers	Data Quality Research Section, arrangements made by SSO(s)	December 2003 - January 2004
I	Draft age group questions and incorporate into questionnaire	Data Quality Research Section, Questionnaire Design Section, Livestock Section	January - February 2004
I	Conduct cognitive interviews on the age group questions (questionnaire)	Data Quality Research Section, selected SSOs	February - March 2004
I	Prepare final version of questionnaire with age groups that will be used for field test	Data Quality Research Section, Questionnaire Design Section, Livestock Section	March - April 2004
II	Draw sample for Phase II	Sample Design Section	May 2004

Phase	Task	Assigned To	Dates
II	Draw sample for Phase III during 2004 Sample Select	Sample Design Section	April - May 2004
II	Collect first quarter of Phase II data using supplemental questions	SSOs	June 2004
II	Analyze and summarize results from first quarter of Phase II	Data Quality Research Section, Livestock Section	July-August 2004
II	Collect second quarter of Phase II data using supplemental questions	SSOs	September 2004
II	Analyze and summarize results from second quarter of Phase II	Data Quality Research Section, Livestock Section	October - November 2004
III	Prepare for field data collection using the new questionnaire on a supplemental sample in Phase III	Data Quality Research Section, Commodity Survey Section, CASIC & Editing Section, Commodity Section (Methods)	October - December 2004
III	Collect Phase III supplemental sample data using the new questionnaire in December 2004	SSOs	December 2004 March 2005 June 2005 September 2005
III	Summarize and compare survey indications from supplemental and operational samples	Data Quality Research Section, Livestock Section	Ongoing from December 2004 - September 2005
III	Prepare final questionnaire for December 2005 implementation	Questionnaire Design Section	August - October 2005
III	Prepare appropriate SSO instructions and training for December 2005 implementation	Commodity Survey Section	August - November 2005
III	Prepare research report	Data Quality Research Section, Livestock Section	July - October 2005



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Illinois Agricultural Statistics Service
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Springfield, IL 62794-9283
1-800-622-9865
Fax: 217-492-4291
E-mail: nass-il@nass.usda.gov

HOG REPORT

March 1, 2004

Appendix C

Project Code 161

Dear Producer:

Information requested in this survey is used to prepare estimates of current and future supplies of pork. Facts about your operation are **confidential** and used only in combination with similar reports from other producers. Response is **voluntary**.

Sincerely,

Brad Schwab
Brad Schwab
State Statistician

Stratum	POID	Tract	Subtr.
_____	_____	_____	_____

Attempted Contacts		
Date	Time	Notes

1. On page 2, you told me about your market hogs. I asked you to categorize them by weight [show respondent page 2, question 4]. As you filled this out, were there any hogs or pigs that you had trouble fitting into these categories?

☐ Yes ☐ No

Why?

2. Are there different weight groupings that would make it easier for you to report your hogs and pigs?

☐ Yes ☐ No

What are they?

Now, I'd like you to answer the same question, using the ages of your hogs and pigs to group them. So,

MARKET HOGS BY AGE

3. Of the **Hogs and Pigs for Market and Home Use** owned by this operation on **March 1**, how many were in each of the following four age groups? (*Excluding breeding hogs and pigs.*)

3a. Under 10 weeks? (*Including unweaned pigs intended for market or home use.*) +

3b. At least 10 weeks, but less than 17 weeks? +

3c. At least 17 weeks, but less than 22 weeks? +

3d. 22 weeks and over? (*Including sows and boars no longer used for breeding.*) +

Continue on Back Page

4. As you answered this question using age groups, were there any hogs or pigs that you had trouble fitting into these categories?

☐ Yes ☐ No

Why?

5. Are there different age groupings that would make it easier for you to report your hogs and pigs?

☐ Yes ☐ No

What are they?

6. Did you find it easier to group your hogs and pigs by weight or age?

☐ Weight ☐ Age

Why?

7. Typically, how many weeks does it take a market hog or pig to reach each of these size categories?

7a. 60 pounds weeks

7b. 120 pounds weeks

7c. 180 pounds weeks

7d. market weight weeks

This completes the survey. Thank you for your help.

Respondent's Name: _____

Phone: () - _____

Date: _____

Enumerator: _____



HOG REPORT

June 1, 2004

Information requested in this survey is used to prepare estimates of current and future supplies of pork. Facts about your operation are **confidential** and used only in combination with similar reports from other producers. Response is **voluntary**.

Stratum	State	POID	Tract	Subtr.
---	--	-----	--	--

1. On page 2, you told me about your market hogs. I asked you to categorize them by weight [show respondent page 2, question 4]. As you filled this out, were there any hogs or pigs that you had trouble fitting into these categories?

☐ Yes ☐ No

Why?

2. Are there different weight groupings that would make it easier for you to report your hogs and pigs?

☐ Yes ☐ No

What are they?

Now, I'd like you to answer the same question, using the ages of your hogs and pigs to group them. So,

MARKET HOGS BY AGE

3. Of the **Hogs and Pigs for Market and Home Use** owned by this operation on **June 1**, how many were in each of the following four age groups? (*Excluding breeding hogs and pigs.*)

3a. Under 10 weeks? (<i>Including unweaned pigs intended for market or home use.</i>)	+	
3b. At least 10 weeks, but less than 17 weeks?	+	
3c. At least 17 weeks, but less than 22 weeks?	+	
3d. 22 weeks and over? (<i>Including sows and boars no longer used for breeding.</i>)	+	

4. As you answered this question using age groups, were there any hogs or pigs that you had trouble fitting into these categories?

☐ Yes ☐ No

Why?

5. Are there different age groupings that would make it easier for you to report your hogs and pigs?

☐ Yes ☐ No

What are they?

6. Did you find it easier to group your hogs and pigs by weight or age?

☐ Weight ☐ Age

Why?

7. Typically, how many weeks does it take a market hog or pig to reach each of these size categories?

3e. 60 pounds weeks

3f. 120 pounds weeks

3g. 180 pounds weeks

3h. market weight weeks

8. Please take a look at this final list of market hog categories which combines the age and weight groupings.

Of the **Hogs and Pigs for Market and Home Use** owned by this operation on **June 1**, how many were in each of the following four market hog inventory groups?

3i. under 60 pounds (0-9 weeks) +

3j. 60 - 119 pounds (10-16 weeks) +

3k. 120 - 179 pounds (17-21 weeks) +

3l. over 180 pounds or market weight (22 weeks and over) +

9. What do you think about the age and weight groupings in this question? Is it easier or harder than age or weight groups by themselves?

This completes the survey. Thank you for your help.

Respondent's Name: _____

Phone: (____) _____ - _____

Date: _____

Enumerator: _____

Comments given by operators for their preference for weight or age

Operators who preferred weights commented that:

- weight gain by age varies a lot producer to producer because of health, season of the year, and disease,
- inventories and movement to and from buildings are based on weight,
- feed and rations are mixed by weight,
- pigs are bought and sold by weight,
- “that’s the way we’ve always done it”,
- “we buy and sell by weight”,
- producers categorize their pigs by weight when they first come in and then assume a daily average gain, so they can usually guess fairly accurately at the weight of a group of pigs/hogs,
- hogs move based on the stage of development which is judged by weight, and
- “that’s what lenders want”, weight gives a better value when lenders do cost accounting, cost of production and cost basis value.

Operators who preferred age commented that:

- hogs are divided by age,
- rations are changed based on age,
- “all pigs are marketed by age”,
- “production records flow with age”,
- age is tracked for all hogs from birth to market while weight is estimated, and
- records are kept by age.

Operators who did not have a preference commented that:

- age may be easier, but not as accurate,
- weight may be easier, but not as accurate,
- both ways have problems, and
- either way is a guess.

Specific categories related to state of development given by producers

The specific categories that producers gave related to stage of development were:

- “on the sow, nursery, grower, finisher”,
- “pigs on sow (farrowing), weaned to 50 pounds (nursery), finishing”,
- “nursery (under 60), grower (60-120), finisher (120+)”,
- “unweaned, 13-59 pounds, 60-119 pounds, 120-179 pounds, 180+ pounds”,
- “under 50 pounds in the nursery, over 50 are finisher”,
- “unweaned, nursery, grower 1 (50-90), grower 2 (90-140), finisher 1 (140-200), finisher 2 (200 and up)”,
- “preweaning, nursery to finish”,
- “in litter, 5-6 weeks, 15 weeks, 24 weeks”,
- “farrow (0-3 weeks), nursery (9 week stage, 4-12 weeks), grower (13-21 weeks, 60-170 pounds), finisher (21-30 weeks, 270 pounds)”,
- “nursery (0-55 pounds), grower (55-100 pounds), finish (100 - market)”.

At least 3 producers implied that the amount of feed consumed may be a factor in determining data collection groups. One producer commented that NASS should “look at the amount of feed consumed also”. Two others commented that “I look at the feed budget and see what ration they are on and to what weight it corresponds”, and “age groups are how they are divided and how rations are changed, etc.”.

Suggestions for weight and age group changes from producers

Suggestions for weight groupings included:

- “50-80 pounds, 80-120 pounds, 120-160 pounds, 160-200 pounds, 200+ pounds”,
- “under 60, over 60” (at least two operators said this),
- “combine third group with fourth group”, (these groups are 120-179 pounds and 180 pounds and over)
- “60-150 pounds, 150-240 pounds, 240+ pounds”,
- “last weight group should be split, should change from ‘180 to 220’ and ‘220 and over’”,
- “120-160 pounds, 160-210 pounds, 210 pounds and over”,
- “0-20 pounds, 20-40 pounds, 40-150 pounds, 150 pounds - market”,
- “0-50 pounds, 50-119 pounds, 120-180 pounds, 180+ pounds”, and
- “separate groups for cull, gilt pool, etc”.

Suggestions for age categories included:

- “last category is not necessary, I combined all hogs 17 weeks and older”,
- use 8 week intervals,
- use 4 week or monthly categories (at least 5 operators said this),
- use days instead of weeks,
- “under 3 weeks, 3-10 weeks, 10-17 weeks, 17-24 weeks, 24 and over”,
- “under 9 weeks instead of 10 weeks”,
- “under 5 weeks, 5-12 weeks, 12-19 weeks, 19 weeks and up”,
- “birth to 3 weeks, 3-10 weeks”,
- “2-10 weeks, 10-19 weeks, 19-27 weeks, 27+ weeks”,
- “at least 10 weeks but less than 16 weeks, at least 16 weeks but less than 22 weeks, 22 weeks and older”,
- “record by week”,
- “10 weeks and under (goes through nursery), over 10 weeks but less than 17 weeks, at least 17 weeks but less than 22 weeks, 22 weeks and over”, and
- “slow growers over 22 weeks may be misidentified as sows or boars to be culled”.

Other Data Collection Issues

Several ideas concerning data collection issues not directly related to the use of age or weight groups came up as a result of the focus groups and cognitive interviews. These ideas are listed below.

- At least two producers and several Hog Statisticians think that the note in parentheses in question 2 is phrased incorrectly. The question reads "How many Sows and Gilts for Breeding were owned by this operation on March 1? (including unweaned gilts intended for breeding)". They felt that the parenthetical statement was misleading and cause for confusion and miscalculations. They said that the decision whether a sow would be used for breeding is not made until they are older.
- Producers in the Minnesota focus groups suggested collecting data on hog marketing intentions for the next several months to help estimate the number of hogs to be slaughtered. They felt that this would be as accurate or more accurate than the current use of weight groups for this purpose.
- Several operators from the Iowa focus group would like to see the use of previously reported data since their operations don't change much over time.

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